EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"54016497"	JPO	OR	OFF	2008/01/10 10:44
S1	2279	514/249.ccls.	US-PGPUB; USPAT	OR	OFF	2008/01/10 10:39
S2	18	514/249.ccls. and 514/252.12.ccls.	US-PGPUB; USPAT	OR	OFF	2008/01/10 10:39
S3	0	514/249.ccls. and 514/252.12.ccls. and 544/236.ccls.	US-PGPUB; USPAT	OR	OFF	2008/01/10 10:39
S4	0	514/249.ccls. and 514/252.12.ccls. and 544/236.ccls. and 544/336.ccls.	US-PGPUB; USPAT	OR	OFF	2008/01/10 10:39
S5	5	544/236.ccls. and 544/336.ccls.	US-PGPUB; USPAT	OR	OFF	2008/01/10 10:39
S6	646	544/236.ccls.	US-PGPUB; USPAT	OR	OFF	2008/01/10 10:39
S7	159	544/236.ccls. and 514/249.ccls.	US-PGPUB; USPAT	OR	OFF	2008/01/10 10:40
S8	81	544/236.ccls. and 514/249.ccls. and cancer	US-PGPUB; USPAT	OR	OFF	2008/01/10 10:42
S9	7	544/236.ccls. and 514/249.ccls. and cancer and topoisomerase	US-PGPUB; USPAT	OR	OFF	2008/01/10 10:44

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NEWS 3	AUG 06	FSTA enhanced with new thesaurus edition
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NEWS 5	AUG 20	CA/CAplus enhanced with CAS indexing in pre-1907 records
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NEWS 7	AUG 27	USPATOLD now available on STN
NEWS 8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS 9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS 10	SEP 13	FORIS renamed to SOFIS
NEWS 11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS 12	SEP 17	CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS 13	SEP 17	CAplus coverage extended to include traditional medicine patents
NEWS 14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 15	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 16	OCT 19	BEILSTEIN updated with new compounds
NEWS 17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS 18	NOV 19	WPIX enhanced with XML display format
NEWS 19	NOV 30	ICSD reloaded with enhancements
NEWS 20	DEC 04	LINPADOCDB now available on STN
NEWS 21	DEC 14	BEILSTEIN pricing structure to change
NEWS 22	DEC 17	USPATOLD added to additional database clusters
NEWS 23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS 24	DEC 17	DGENE now includes more than 10 million sequences
NEWS 25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 27	DEC 17	CA/CAplus enhanced with new custom IPC display formats
NEWS 28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 29	JAN 02	STN pricing information for 2008 now available

NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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NEWS IPC8	For general information regarding STN implementation of IPC 8

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 09:36:51 ON 10 JAN 2008

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 09:37:03 ON 10 JAN 2008
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DICTIONARY FILE UPDATES: 8 JAN 2008 HIGHEST RN 960198-43-0

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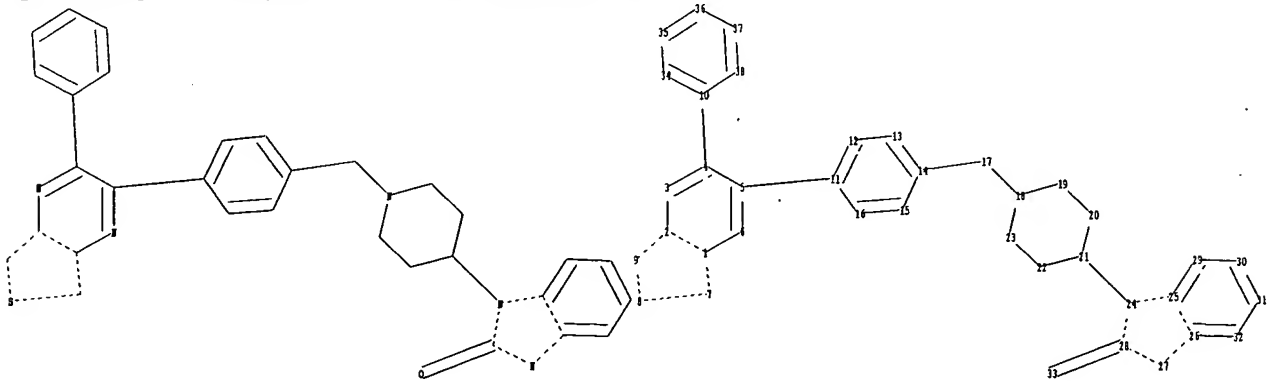
http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10530252.str



chain nodes :

```
17  33
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  18  19  20  21  22  23  24
25  26  27  28  29  30  31  32  34  35  36  37  38
chain bonds :
4-10  5-11  14-17  17-18  21-24  28-33
ring bonds :
1-2  1-6  1-7  2-3  2-9  3-4  4-5  5-6  7-8  8-9  10-34  10-38  11-12  11-16  12-13
 13-14  14-15  15-16  18-19  18-23  19-20  20-21  21-22  22-23  24-25  24-28  25-26
 25-29  26-27  26-32  27-28  29-30  30-31  31-32  34-35  35-36  36-37  37-38
exact/norm bonds :
1-2  1-6  1-7  2-3  2-9  3-4  4-5  5-6  7-8  8-9  17-18  18-19  18-23  19-20  20-21
 21-22  21-24  22-23  24-25  24-28  25-26  26-27  27-28  28-33
exact bonds :
4-10  5-11  14-17
normalized bonds :
10-34  10-38  11-12  11-16  12-13  13-14  14-15  15-16  25-29  26-32  29-30  30-31
31-32  34-35  35-36  36-37  37-38


Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  14:Atom  15:Atom  16:Atom  17:CLASS  18:Atom  19:Atom
20:Atom  21:Atom  22:Atom  23:Atom  24:Atom  25:Atom  26:Atom  27:Atom  28:Atom
29:Atom  30:Atom  31:Atom  32:Atom  33:CLASS  34:Atom  35:Atom  36:Atom  37:Atom
38:Atom



L1      STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.


=> s l1
SAMPLE SEARCH INITIATED 09:37:26 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       21 TO ITERATE

100.0% PROCESSED       21 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          146 TO      694
PROJECTED ANSWERS:               0 TO        0

L2            0 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 09:37:29 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      482 TO ITERATE

100.0% PROCESSED      482 ITERATIONS                                2 ANSWERS
SEARCH TIME: 00.00.01

L3            2 SEA SSS FUL L1
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=> fil caplus
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	178.36	178.57

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FILE COVERS 1907 - 10 Jan 2008 VOL 148 ISS 2
FILE LAST UPDATED: 8 Jan 2008 (20080108/ED)

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=> s l3
L4 1 L3

=> d ibib abs hitstr tot

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:414709 CAPLUS
DOCUMENT NUMBER: 141:7136
TITLE: A preparation of thieno[3,4-b]pyrazine derivatives useful as inhibitors of Akt activity
INVENTOR(S): Duggan, Mark E.; Lindsley, Craig W.; Zhao, Zhijian
PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041162	A2	20040521	WO 2003-US34007	20031024
WO 2004041162	A3	20040729		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2501365	A1	20040521	CA 2003-2501365	20031024
AU 2003284981	A1	20040607	AU 2003-284981	20031024
EP 1558586	A2	20050803	EP 2003-779301	20031024
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006507299	T	20060302	JP 2004-550130	20031024
US 2005288294	A1	20051229	US 2005-530252	20050405
PRIORITY APPLN. INFO.:			US 2002-422307P P	20021030
			WO 2003-US34007 W	20031024

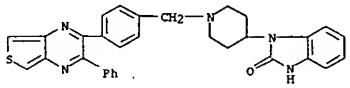
OTHER SOURCE(S): MARPAT 141:7136
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to thieno[3,4-b]pyrazine derivs. of formula I [wherein: X, Y, and Z are independently selected from C, N, S, or O provided that at least one of X, Y, or Z is N, S, or O; B is a heterocycle, optionally substituted with 1 to 3 substituents; R1 and R2 are independently selected from C(O)-O-(alkyl/aryl/heterocyclyl), alk(en/yn)yl, or CO2H, etc.], useful as inhibitors of activity of one or more of the isoform of the serine/threonine protein kinase, Akt (also known as PKB). The invention is further directed to chemotherapeutic compns. containing the compds. of this invention and methods for treating cancer comprising administration of the compds. of the invention. The invented compds. were screened in Akt kinases assays, PKA and PKC assays, in cell based assays to determine inhibition of Akt/PKB, and for inhibition of tumor growth (specific compds. were tested and were found to have IC50 < 20 μM against one or more of Akt1, Akt2, and Akt3). For instance, thienopyrazine derivs. II was prepared via heterocyclization of the obtained diketone deriv. III with 3,4-diaminothiophene (no yield data).

IT 690661-94-0P 690662-05-6P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of thienopyrazine derivs. useful as inhibitors of Akt activity)

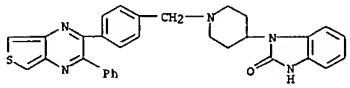
RN 690661-94-0 CAPLUS
CN 2H-Benzimidazol-2-one, 1,3-dihydro-1-[1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-4-piperidinyl]- (CA INDEX NAME)



RN 690662-05-6 CAPLUS
CN 2H-Benzimidazol-2-one, 1,3-dihydro-1-[1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-4-piperidinyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 690661-94-0
CMF C31 H27 N5 O S



CM 2

CRN 76-05-1
CMF C2 H F3 O2

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=> fil reg
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       5.93     184.50

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)            SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                      -0.80      -0.80

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DICTIONARY FILE UPDATES:    8 JAN 2008  HIGHEST RN 960198-43-0

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http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10530252b.str
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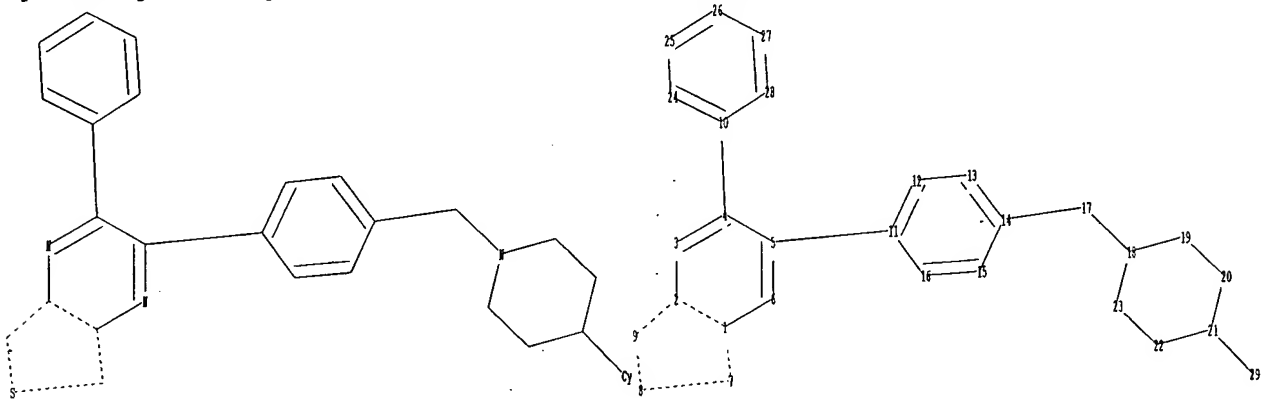


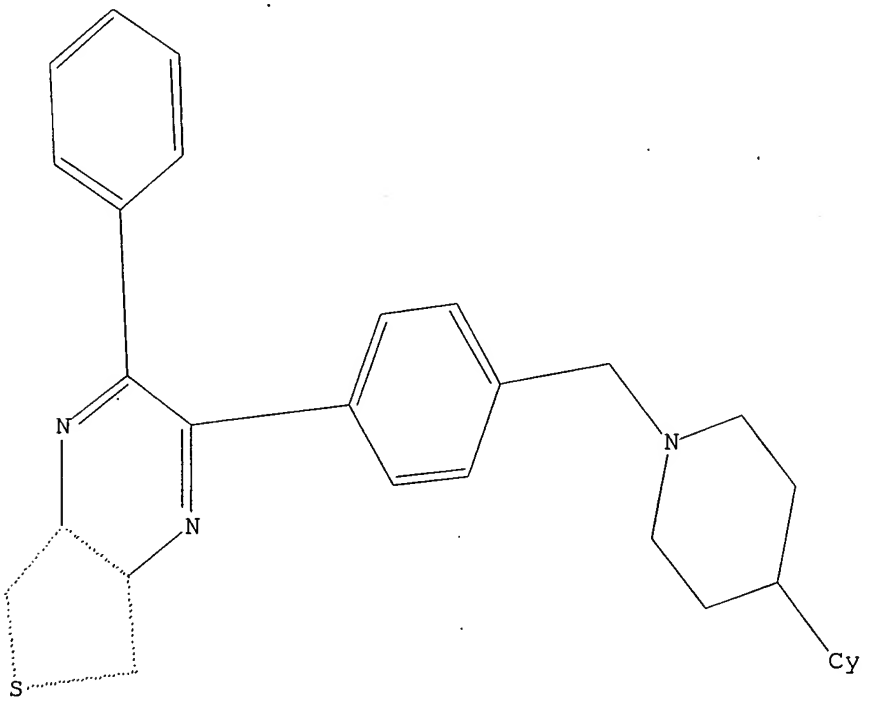
```
chain nodes :
17  29
ring nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  18  19  20  21  22  23  24
25  26  27  28
```

chain bonds :
4-10 5-11 14-17 17-18 21-29
ring bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 5-6 7-8 8-9 10-24 10-28 11-12 11-16 12-13
13-14 14-15 15-16 18-19 18-23 19-20 20-21 21-22 22-23 24-25 25-26 26-27
27-28
exact/norm bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 5-6 7-8 8-9 17-18 18-19 18-23 19-20 20-21
21-22 21-29 22-23
exact bonds :
4-10 5-11 14-17
normalized bonds :
10-24 10-28 11-12 11-16 12-13 13-14 14-15 15-16 24-25 25-26 26-27 27-28

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:CLASS 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
29:Atom

L5 STRUCTURE UPLOADED

=> d
L5 HAS NO ANSWERS
L5 STR



Structure attributes must be viewed using STN Express query preparation.

```
=> s l5
SAMPLE SEARCH INITIATED 09:40:11 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       15 TO ITERATE

100.0% PROCESSED       15 ITERATIONS                                 1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:           68 TO      532
PROJECTED ANSWERS:               1 TO       80

L6             1 SEA SSS SAM L5

=> s l5 full
FULL SEARCH INITIATED 09:40:15 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      274 TO ITERATE

100.0% PROCESSED      274 ITERATIONS                                 8 ANSWERS
SEARCH TIME: 00.00.01

L7             8 SEA SSS FUL L5

=> fil caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   179.74     364.24

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00      -0.80

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FILE COVERS 1907 - 10 Jan 2008  VOL 148 ISS 2
FILE LAST UPDATED: 8 Jan 2008  (20080108/ED)

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=> s l7
L8             1 L7
```

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.48	364.72

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.80

FILE 'REGISTRY' ENTERED AT 09:40:22 ON 10 JAN 2008

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DICTIONARY FILE UPDATES: 8 JAN 2008 HIGHEST RN 960198-43-0

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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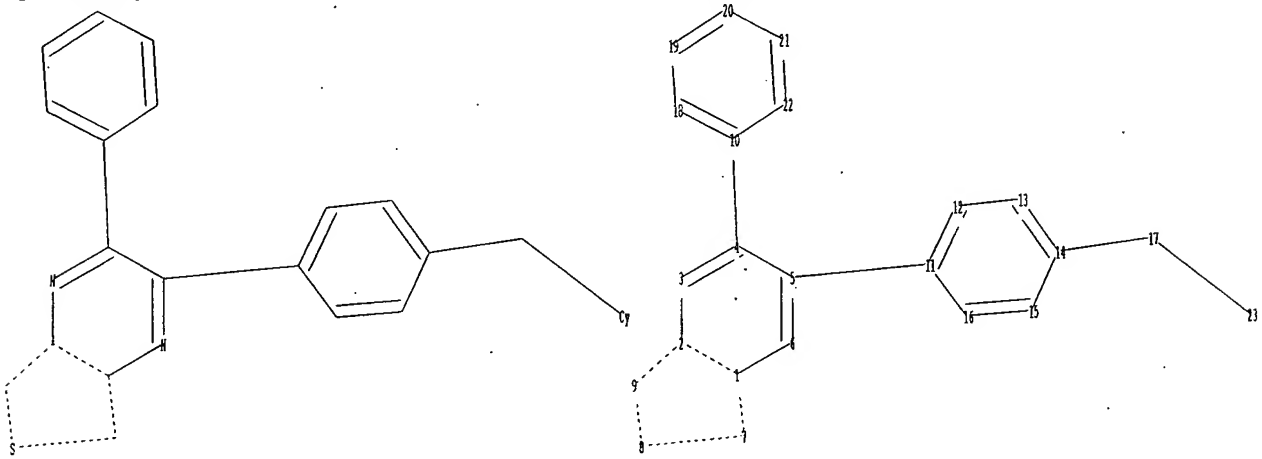
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10530252c.str



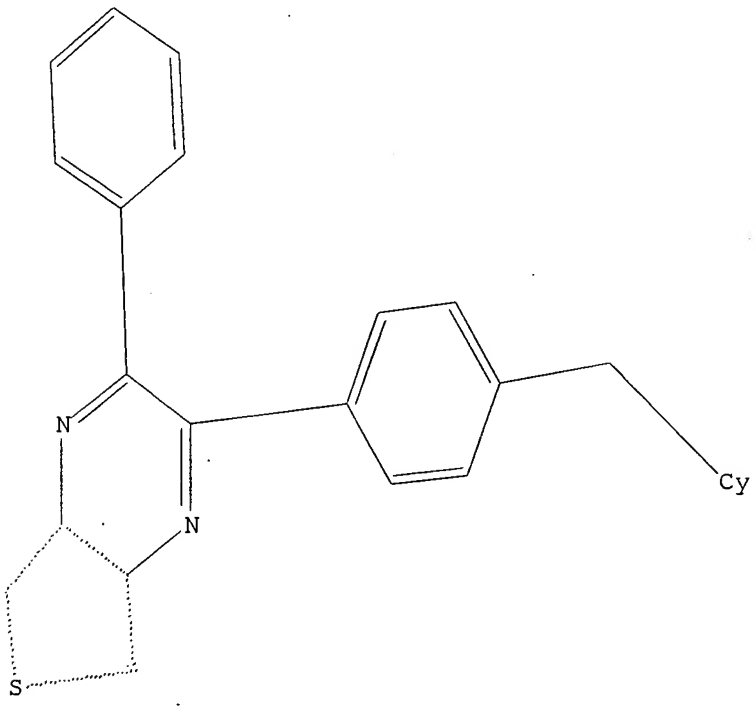
chain nodes :
17 23
ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 19 20 21 22
chain bonds :
4-10 5-11 14-17 17-23
ring bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 5-6 7-8 8-9 10-18 10-22 11-12 11-16 12-13
13-14 14-15 15-16 18-19 19-20 20-21 21-22
exact/norm bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 5-6 7-8 8-9 17-23
exact bonds :
4-10 5-11 14-17
normalized bonds :
10-18 10-22 11-12 11-16 12-13 13-14 14-15 15-16 18-19 19-20 20-21 21-22

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:CLASS 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom

L9 STRUCTURE UPLOADED

=> d
L9 HAS NO ANSWERS
L9 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l9

```
SAMPLE SEARCH INITIATED 09:41:10 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -       5 TO ITERATE

100.0% PROCESSED        5 ITERATIONS                                 1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:            5 TO      234
PROJECTED ANSWERS:               1 TO       80

L10           1 SEA SSS SAM L9

=> s l9 full
FULL SEARCH INITIATED 09:41:13 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      134 TO ITERATE

100.0% PROCESSED      134 ITERATIONS                                18 ANSWERS
SEARCH TIME: 00.00.01

L11           18 SEA SSS FUL L9

=> fil caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                  178.36     543.08

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                    0.00      -0.80

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FILE COVERS 1907 - 10 Jan 2008  VOL 148 ISS 2
FILE LAST UPDATED: 8 Jan 2008  (20080108/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
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http://www.cas.org/infopolicy.html

=> s l11
L12           1 L11

=> fil reg
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Connecting via Winsock to STN

Welcome to STN International! Enter x:x

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PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS 3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS 4	AUG 13	CA/CAplus enhanced with additional kind codes for granted patents
NEWS 5	AUG 20	CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS 6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS 7	AUG 27	USPATOLD now available on STN
NEWS 8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS 9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS 10	SEP 13	FORIS renamed to SOFIS
NEWS 11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS 12	SEP 17	CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS 13	SEP 17	CAplus coverage extended to include traditional medicine patents
NEWS 14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS 15	OCT 02	CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS 16	OCT 19	BEILSTEIN updated with new compounds
NEWS 17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS 18	NOV 19	WPIX enhanced with XML display format
NEWS 19	NOV 30	ICSD reloaded with enhancements
NEWS 20	DEC 04	LINPADOCDB now available on STN
NEWS 21	DEC 14	BEILSTEIN pricing structure to change
NEWS 22	DEC 17	USPATOLD added to additional database clusters
NEWS 23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS 24	DEC 17	DGENE now includes more than 10 million sequences
NEWS 25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS 26	DEC 17	MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 27	DEC 17	CA/CAplus enhanced with new custom IPC display formats
NEWS 28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS 29	JAN 02	STN pricing information for 2008 now available

NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 09:54:13 ON 10 JAN 2008

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 09:54:20 ON 10 JAN 2008
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STRUCTURE FILE UPDATES: 8 JAN 2008 HIGHEST RN 960198-43-0
DICTIONARY FILE UPDATES: 8 JAN 2008 HIGHEST RN 960198-43-0

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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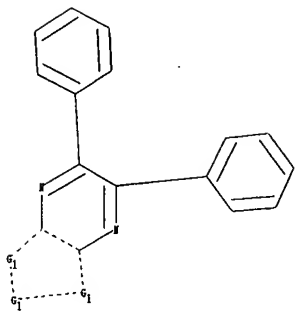
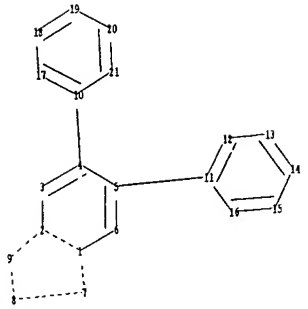
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10530252g.str





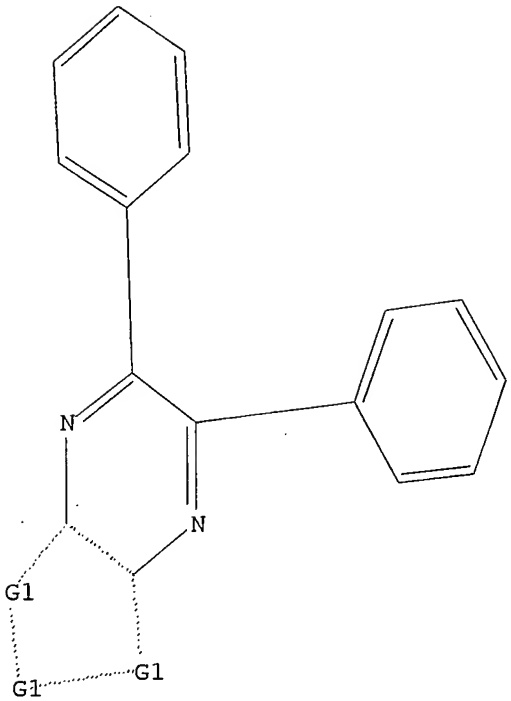
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
chain bonds :
4-10 5-11
ring bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 5-6 7-8 8-9 10-17 10-21 11-12 11-16 12-13
13-14 14-15 15-16 17-18 18-19 19-20 20-21
exact/norm bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 4-10 5-6 5-11 7-8 8-9
normalized bonds :
10-17 10-21 11-12 11-16 12-13 13-14 14-15 15-16 17-18 18-19 19-20 20-21

G1:O,S,N,C

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom

L1 STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1 STR



G1 O,S,N,C

Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED -      864 TO ITERATE

100.0% PROCESSED      864 ITERATIONS                                  27 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        15517 TO    19043
PROJECTED ANSWERS:             229 TO      851

L2            27 SEA SSS SAM L1

=> s l1 full
FULL SEARCH INITIATED 09:54:39 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    17225 TO ITERATE

100.0% PROCESSED    17225 ITERATIONS                                401 ANSWERS
SEARCH TIME: 00.00.01

L3          .401 SEA SSS FUL L1

=> fil caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   178.36     178.57

FILE 'CAPLUS' ENTERED AT 09:54:42 ON 10 JAN 2008
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FILE LAST UPDATED: 8 Jan 2008 (20080108/ED)

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http://www.cas.org/infopolicy.html

=> s l3
L4 126 L3

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.48	179.05

FILE 'REGISTRY' ENTERED AT 09:54:46 ON 10 JAN 2008
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STRUCTURE FILE UPDATES: 8 JAN 2008 HIGHEST RN 960198-43-0
DICTIONARY FILE UPDATES: 8 JAN 2008 HIGHEST RN 960198-43-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

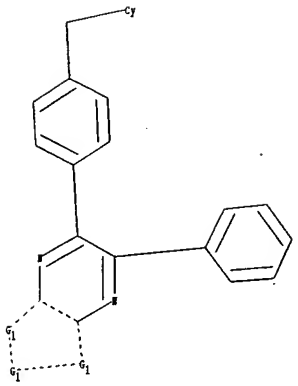
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

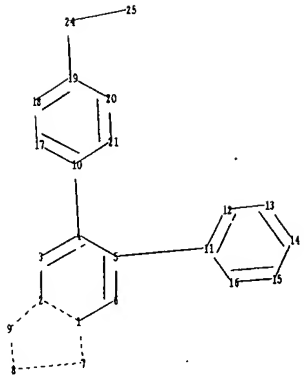
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10530252h.str





chain nodes :
24 25
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
chain bonds :
4-10 5-11 19-24 24-25
ring bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 5-6 7-8 8-9 10-17 10-21 11-12 11-16 12-13
13-14 14-15 15-16 17-18 18-19 19-20 20-21
exact/norm bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 4-10 5-6 5-11 7-8 8-9 19-24 24-25
normalized bonds :
10-17 10-21 11-12 11-16 12-13 13-14 14-15 15-16 17-18 18-19 19-20 20-21

G1:O,S,N,C

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom 24:CLASS 25:Atom

L5 STRUCTURE UPLOADED

=> d
L5 HAS NO ANSWERS
L5 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

```
=> s l5
SAMPLE SEARCH INITIATED 09:55:25 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -      168 TO ITERATE

100.0% PROCESSED      168 ITERATIONS                                  1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:         2583 TO     4137
PROJECTED ANSWERS:               1 TO       80

L6            1 SEA SSS SAM L5

=> s l5 full
FULL SEARCH INITIATED 09:55:28 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     3299 TO ITERATE

100.0% PROCESSED     3299 ITERATIONS                                 22 ANSWERS
SEARCH TIME: 00.00.01

L7           22 SEA SSS FUL L5

=> fil caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   178.36     357.41

FILE 'CAPLUS' ENTERED AT 09:55:31 ON 10 JAN 2008
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FILE LAST UPDATED: 8 Jan 2008  (20080108/ED)

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=> s l7
L8            1 L7

=> d ibib abs hitstr tot
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L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:414709 CAPLUS
DOCUMENT NUMBER: 141:7136
TITLE: A preparation of thieno[3,4-b]pyrazine derivatives useful as inhibitors of Akt activity
INVENTOR(S): Duggan, Mark E.; Lindsley, Craig W.; Zhao, Zhijian
PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041162	A2	20040521	WO 2003-US34007	20031024
WO 2004041162	A3	20040729		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2501365	A1	20040521	CA 2003-2501365	20031024
AU 2003284981	A1	20040607	AU 2003-284981	20031024
EP 1558586	A2	20050803	EP 2003-779301	20031024
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006507299	T	20060302	JP 2004-550130	20031024
US 2005288294	A1	20051229	US 2005-530252	20050405
PRIORITY APPLN. INFO.:			US 2002-422307P P	20021030
			WO 2003-US34007 W	20031024

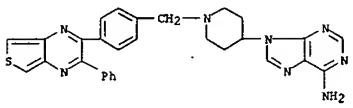
OTHER SOURCE(S): MARPAT 141:7136
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

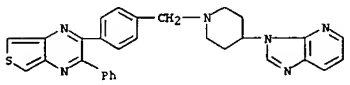
AB The invention relates to thieno[3,4-b]pyrazine derivs. of formula I [wherein: X, Y, and Z are independently selected from C, N, S, or O provided that at least one of X, Y, or Z is N, S, or O; B is a heterocycle, optionally substituted with 1 to 3 substituents; R1 and R2 are independently selected from C(O)-O-(alkyl/aryl/heterocyclyl), alk(en/yn)yl, or CO2H, etc.], useful as inhibitors of activity of one or more of the isoform of the serine/threonine protein kinase, Akt (also known as PKB). The invention is further directed to chemotherapeutic compns. containing the compds. of this invention and methods for treating cancer comprising administration of the compds. of the invention. The invented compds. were screened in Akt kinases assays, PKA and PKC assays, in cell based assays to determine inhibition of Akt/PKB, and for inhibition of tumor growth (specific compds. were tested and were found to have IC50 < 20 μM against one or more of Akt1, Akt2, and Akt3). For instance, thienopyrazine derivs. II was prepared via heterocyclization of the obtained

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 690661-97-3 CAPLUS
CN 9H-Purin-6-amine, 9-[1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-4-piperidinyl]- (CA INDEX NAME)



RN 690661-98-4 CAPLUS
CN Thieno[3,4-b]pyrazine, 2-[4-[[4-(3H-imidazo[4,5-b]pyridin-3-yl)-1-piperidinyl]methyl]phenyl]-3-phenyl- (CA INDEX NAME)



RN 690661-99-5 CAPLUS
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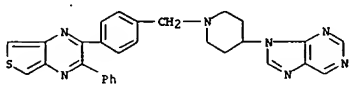

RN 690662-00-1 CAPLUS
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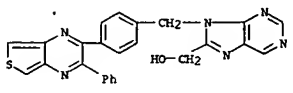
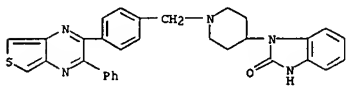


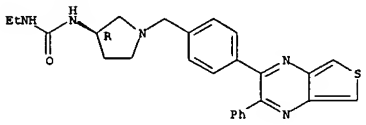
RN 690662-01-2 CAPLUS
CN 9H-Purine, 8-methyl-9-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]- (CA INDEX NAME)

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
diketone deriv. III with 3,4-diaminothiophene (no yield data).
IT 690661-94-0P 690661-95-1P 690661-96-2P
690661-97-3P 690661-98-4P 690661-99-5P
690662-00-1P 690662-01-2P 690662-02-3P
690662-03-4P 690662-04-5P 690662-05-6P
690662-06-7P 690662-07-8P 690662-08-9P
690662-09-0P 690662-10-3P 690662-11-4P
690662-12-5P 690662-13-6P 690662-14-7P
690662-15-8P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of thienopyrazine derivs. useful as inhibitors of Akt activity)
RN 690661-94-0 CAPLUS
CN 2H-Benzimidazol-2-one, 1,3-dihydro-1-[1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-4-piperidinyl]- (CA INDEX NAME)



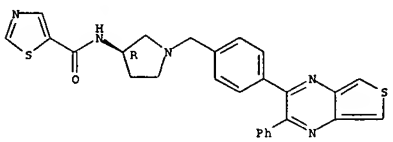
RN 690661-95-1 CAPLUS
CN Urea, N-ethyl-N'-[(3R)-1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-3-pyrrolidinyl]- (CA INDEX NAME)

Absolute stereochemistry.

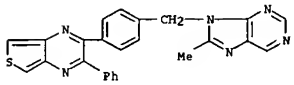


RN 690661-96-2 CAPLUS
CN 5-Thiazolecarboxamide, N-[(3R)-1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-3-pyrrolidinyl]- (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



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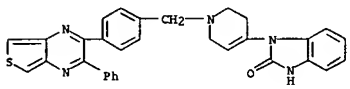
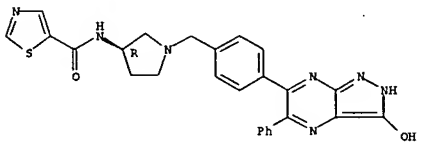
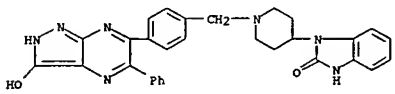


RN 690662-03-4 CAPLUS
CN 5-Thiazolecarboxamide, N-[(3R)-1-[[4-(3-hydroxy-5-phenyl-2H-pyrazolo[3,4-b]pyrazin-6-yl)phenyl]methyl]-3-pyrrolidinyl]- (CA INDEX NAME)

Absolute stereochemistry.



RN 690662-04-5 CAPLUS
CN 2H-Benzimidazol-2-one, 1,3-dihydro-1-[1-[[4-(3-hydroxy-5-phenyl-2H-pyrazolo[3,4-b]pyrazin-6-yl)phenyl]methyl]-4-piperidinyl]- (CA INDEX NAME)

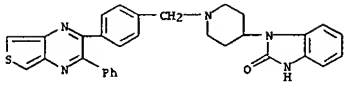


RN 690662-05-6 CAPLUS
CN 2H-Benzimidazol-2-one, 1,3-dihydro-1-[1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-4-piperidinyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CM 1

CRN 690661-94-0
CMF C31 H27 N5 O S



CM 2

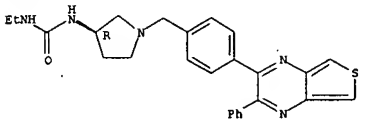
CRN 76-05-1
CMF C2 H F3 O2

RN 690662-06-7 CAPLUS
CN Urea, N-ethyl-N'-[(3R)-1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-3-pyrrolidinyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 690661-95-1
CMF C26 H27 N5 O S

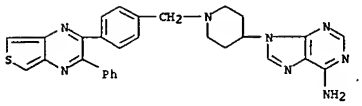
Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



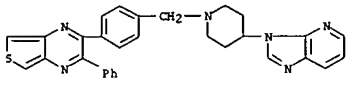
CM 2

CRN 76-05-1
CMF C2 H F3 O2

RN 690662-09-0 CAPLUS
CN Thieno[3,4-b]pyrazine, 2-[4-[[4-(3H-imidazo[4,5-b]pyridin-3-yl)-1-piperidinyl]methyl]phenyl]-3-phenyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 690661-98-4
CMF C30 H26 N6 S



CM 2

CRN 76-05-1
CMF C2 H F3 O2

RN 690662-10-3 CAPLUS
CN 9H-Purine, 9-[1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-4-piperidinyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

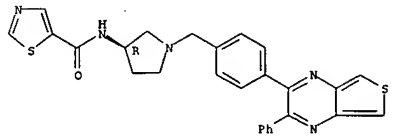
L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 690662-07-8 CAPLUS
CN 5-Thiazolecarboxamide, N-[(3R)-1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-3-pyrrolidinyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 690661-96-2
CMF C27 H23 N5 O S2

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

RN 690662-08-9 CAPLUS
CN 9H-Purin-6-amine, 9-[1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-4-piperidinyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

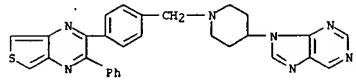
CM 1

CRN 690661-97-3
CMF C29 H26 N8 S

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CM 1

CRN 690661-99-5
CMF C29 H25 N7 S



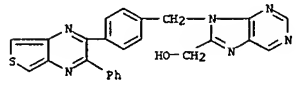
CM 2

CRN 76-05-1
CMF C2 H F3 O2

RN 690662-11-4 CAPLUS
CN 9H-Purine-8-methanol, 9-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 690662-00-1
CMF C25 H18 N6 O S



CM 2

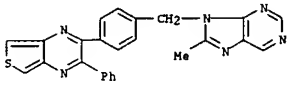
CRN 76-05-1
CMF C2 H F3 O2

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 690662-12-5 CAPLUS
CN 9H-Purine, 8-methyl-9-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 690662-01-2
CMF C25 H18 N6 S



CM 2

CRN 76-05-1
CMF C2 H F3 O2

RN 690662-13-6 CAPLUS
CN 2H-Benzimidazol-2-one, 1,3-dihydro-1-[1,2,3,6-tetrahydro-1-[[4-(3-phenylthieno[3,4-b]pyrazin-2-yl)phenyl]methyl]-4-pyridinyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

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CRN 690662-02-3
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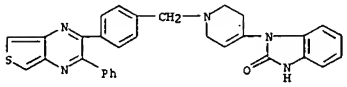
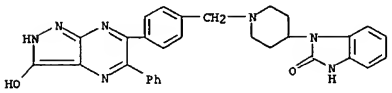


CM 2

CRN 76-05-1
CMF C2 H F3 O2

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



CM 2

CRN 76-05-1
CMF C2 H F3 O2

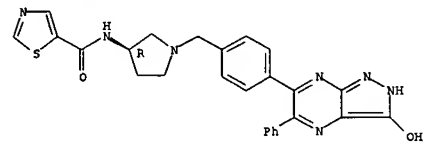
L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 690662-14-7 CAPLUS
CN 5-Thiazolecarboxamide, N-[(3R)-1-[[4-(3-hydroxy-5-phenyl-2H-pyrazolo[3,4-b]pyrazin-6-yl)phenyl]methyl]-3-pyrrolidinyl]-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 690662-03-4
CMF C26 H23 N7 O2 S

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

RN 690662-15-8 CAPLUS
CN 2H-Benzimidazol-2-one, 1,3-dihydro-1-[1-[[4-(3-hydroxy-5-phenyl-2H-pyrazolo[3,4-b]pyrazin-6-yl)phenyl]methyl]-4-piperidinyl]-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 690662-04-5
CMF C30 H27 N7 O2

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	5.93	363.34

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.80	-0.80

FILE 'REGISTRY' ENTERED AT 09:55:42 ON 10 JAN 2008

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

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DICTIONARY FILE UPDATES: 8 JAN 2008 HIGHEST RN 960198-43-0

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http://www.cas.org/support/stngen/stndoc/properties.html

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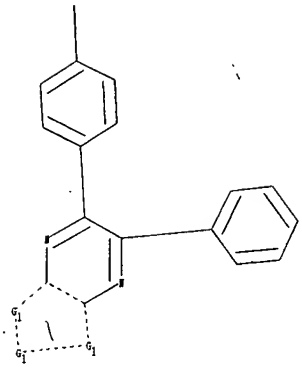

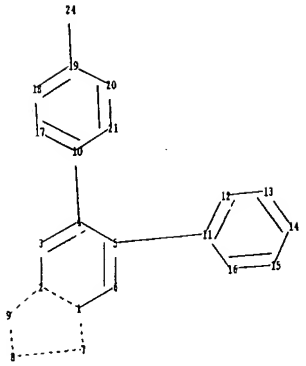

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24
ring nodes :
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4-10 5-11 19-24
ring bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 5-6 7-8 8-9 10-17 10-21 11-12 11-16 12-13
13-14 14-15 15-16 17-18 18-19 19-20 20-21
exact/norm bonds :
1-2 1-6 1-7 2-3 2-9 3-4 4-5 4-10 5-6 5-11 7-8 8-9 19-24
normalized bonds :
10-17 10-21 11-12 11-16 12-13 13-14 14-15 15-16 17-18 18-19 19-20 20-21

G1:O,S,N,C

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom 24:CLASS

L9 STRUCTURE UPLOADED

=> d
L9 HAS NO ANSWERS
L9 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SEARCH INITIATED 09:56:16 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 168 TO ITERATE

100.0% PROCESSED 168 ITERATIONS 2 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2583 TO 4137
PROJECTED ANSWERS: 2 TO 124

L10 2 SEA SSS SAM L9

=> s l9 full
FULL SEARCH INITIATED 09:56:19 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3299 TO ITERATE

100.0% PROCESSED 3299 ITERATIONS 51 ANSWERS
SEARCH TIME: 00.00.01

L11 51 SEA SSS FUL L9

=> fil caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 178.36 541.70

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE ENTRY TOTAL SESSION
CA SUBSCRIBER PRICE 0.00 -0.80

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FILE COVERS 1907 - 10 Jan 2008 VOL 148 ISS 2
FILE LAST UPDATED: 8 Jan 2008 (20080108/ED)

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http://www.cas.org/infopolicy.html

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=> s l11
L12          18 L11

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L12 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:922054 CAPLUS
DOCUMENT NUMBER: 147:448559
TITLE: Porphyrin, phthalocyanine and porphyrazine derivatives with multifluorenyl substituents as efficient deep-red emitters
AUTHOR(S): Barker, Carl A.; Zeng, Xianshun; Bettington, Sylvia; Batsanov, Andrei S.; Bryce, Martin R.; Beeby, Andrew
CORPORATE SOURCE: Department of Chemistry, Durham University, Durham, DH1 3LE, UK
SOURCE: Chemistry--A European Journal (2007), 13(23), 6710-6717, S6710/1-S6710/14
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 147:448559

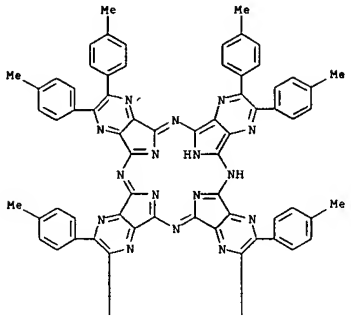
AB The synthesis and photophys. properties are described for a series of porphyrin, phthalocyanine and pyrazinoporphyrazine derivs. which bear four or eight peripheral fluorenyl substituents as antennae. Representative examples are 5,10,15,20-tetra(9,9-dihexyl-9H-fluoren-2-yl)porphyrin, 5,10,15,20-tetrakis[4-(9,9-dihexyl-9H-fluoren-2-yl)phenyl]porphyrin (I), 2,3,9,10,16,17,23,24-octakis(9,9-dihexyl-9H-fluoren-2-yl)-29H,31H-phthalocyanine (II) and 2,3,9,10,16,17,23,24-octakis[4-(9,9-dihexyl-9H-fluoren-2-yl)phenyl]-29H,31H-tetra-pyrazinoporphyrazine (III). Palladium-mediated Suzuki-Miyaura cross-coupling reactions have been key steps for attaching the substituents. The compds. are deep-red emitters: λmax(em) = 659 (I), 737 (II) and 684 nm (III). Their absorption and emission spectra, their fluorescence lifetimes and quantum yields are correlated with the structures of the macrocycles and the substituents. The solution fluorescence quantum yields of porphyrin derivs. substituted with fluorene and terphenyl substituents (Φf = 0.21-0.23) are approx. twice that of tetraphenylporphyrin. For phthalocyanine derivative II, Φf was very high (0.88). Specific excitation of the fluorene units of II produced emission from both of them (λmax = 480 nm) and also from the phthalocyanine core (λmax = 750nm), indicating a competitive rate of energy transfer and radiative decay of the fluorenes. Organic light-emitting devices (OLEDs) were made by spin-coating techniques by using a poly-spirobifluorene (PSBF) copolymer as the host blended with I (5 weight%) in the configuration ITO/PEDOT:PSS/PSBF copolymer:3/Ca/Al. Deep-red emission (λmax = 663 nm; CIE coordinates x = 0.70, y = 0.27) was observed with an external quantum efficiency of 2.5% (photons/electron) (at 7.5 mA cm-2), a low turn-on voltage and high emission intensity (luminance) of 5500 cd m-2 (at 250 mA/m2).

IT 952155-34-9
RL: PRP (Properties)
(preparation and photophys. properties of porphyrin, phthalocyanine and porphyrazine derivs. with multifluorenyl substituents)

RN 952155-34-9 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

L12 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A

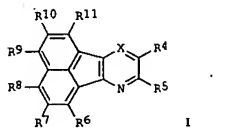
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:237834 CAPLUS
DOCUMENT NUMBER: 142:325647
TITLE: Electroluminescent materials containing perylenylamines and azafluoranthenes, and red-emitting organic electroluminescent devices using them
INVENTOR(S): Toba, Yasumasa; Tanaka, Hiroaki; Amano, Saneomi; Suda, Yasumasa
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 68 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005068367	A	20050317	JP 2003-303402	20030827
PRIORITY APPLN. INFO.:			JP 2003-303402	20030827

OTHER SOURCE(S): MARPAT 142:325647
GI



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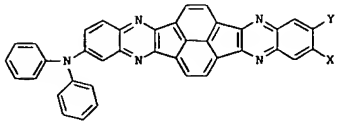


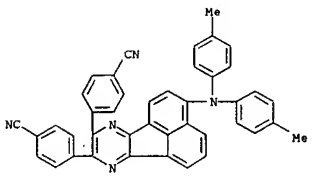
II

AB The materials contain Ar1NR1R2 [Ar1 = (un)substituted perylenyl; R1, R2 = aromatic hydrocarbyl, aromatic heterocyclyl] and azafluoranthenes I (X = N, CR3; R3 = H, aliphatic hydrocarbyl, NAr2Ar3, etc.; ≥1 of R3-R11 = NAr2Ar3). Thus, an organic electroluminescent device having an emitter layer containing di[4-(1,1-dimethylphenylmethyl)phenyl]-3-perylenylamine, and 1:1 mixture of II (Y = NPh2; Z = H) and I (Y = H, Z = NPh2) showed high luminescence intensity at low operation voltage.

IT 566933-14-0
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(dopant; electroluminescent materials containing perylenylamines and azafluoranthenes for red-emitting organic electroluminescent devices)

RN 566933-14-0 CAPLUS
CN Benzonitrile, 4,4'-[3-[bis(4-methylphenyl)amino]acenaphtho[1,2-b]pyrazine-8,9-diyl]bis- (9CI) (CA INDEX NAME)

L12 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L12 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:1127366 CAPLUS
DOCUMENT NUMBER: 142:56362
TITLE: Preparation of 3-substituted 5,6-diaryl-pyrazine-2-carboxamide and 2-sulfonamide derivatives as cannabinoid receptor 1 (CB1) modulators
INVENTOR(S): Cheng, Leifeng
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 120 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004111034	A1	20041223	WO 2004-SE970	20040616
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004247616	A1	20041223	AU 2004-247616	20040616
CA 2527035	A1	20041223	CA 2004-2527035	20040616
EP 1638953	A1	20060329	EP 2004-749012	20040616
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
BR 2004011508	A	20060725	BR 2004-11508	20040616
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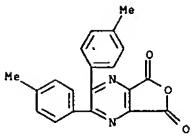
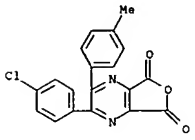
JP 2006527771	T	20061207	JP 2006-517044	20040616
NO 2005005919	A	20060216	NO 2005-5919	20051213
MX 2005PA13711	A	20060308	MX 2005-PA13711	20051215
US 2007093484	A1	20070426	US 2005-560862	20051215
PRIORITY APPLN. INFO.:			GB 2003-14057 A	20030618
			WO 2004-SE970 W	20040616

OTHER SOURCE(S): MARPAT 142:56362
GI

L12 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

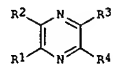


RN 811441-83-5 CAPLUS
CN Furo[3,4-b]pyrazine-5,7-dione, 2-(4-chlorophenyl)-3-(4-methylphenyl)- (CA INDEX NAME)

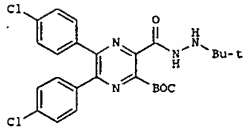


REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



I



II

AB Title compds. I [wherein R1, R2 = independently (un)substituted Ph, thienyl, pyridinyl; R3 = X-Y-NR5R6; X = absent, CO, or SO2; Y = absent, NH optionally substituted by an alkyl group; R5, R6 = independently (un)substituted amino/alkyl, (CH2)r(phenyl)s, (un)saturated 5-8-membered heterocyclyl; R5 = H and R6 = defined above; or R5NR6 = (un)substituted (un)saturated 5-8-membered heterocyclyl; r = 0-4; s = 1 when r = 0, otherwise s = 1 or 2; R5NR6 = (un)substituted (un)saturated 5-8-membered heterocyclyl; R4 = (CH2)nCO2R7; n = 0-4; R7 = (un)substituted cycloalkyl/cyclo/alkyl, (CH2)nphenyl, saturated or partially unsatd. 5-8-membered heterocyclyl, CONH2 and derivs.; n = defined as above; and pharmaceutically acceptable salts thereof] were prepared as cannabinoid 1 (CB1) receptor modulators. For example, reacting 3-(tert-butoxycarbonyl)-5,6-bis(4-chlorophenyl)pyrazine-2-carboxylic acid (preparation given) with tert-butylhydrazine hydrochloride gave pyrazine II. I are active at the CB1 receptor (IC50 < 1 μM), most preferred compds. have IC50 < 200 nM. For instance, II exhibited an IC50 (hCB1) = 1.8 nM. Thus, I and their pharmaceutical compns. are useful for the treatment of obesity, psychiatric and neurol. disorders (no data).
IT 811441-56-2P, 2,3-Bis(4-methylphenyl)furo[3,4-b]pyrazine-5,7-dione
811441-83-5P, 2-(4-Chlorophenyl)-3-(4-methylphenyl)furo[3,4-b]pyrazine-5,7-dione
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of 3-substituted 5,6-diarylpyrazine-2-carboxamide and 2-sulfonamide derivs. as CB1 modulators)
RN 811441-56-2 CAPLUS
CN Furo[3,4-b]pyrazine-5,7-dione, 2,3-bis(4-methylphenyl)- (CA INDEX NAME)

L12 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:414709 CAPLUS
DOCUMENT NUMBER: 141:7136
TITLE: A preparation of thieno[3,4-b]pyrazine derivatives useful as inhibitors of Akt activity
INVENTOR(S): Duggan, Mark E.; Lindsley, Craig W.; Zhao, Zhijian
PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041162	A2	20040521	WO 2003-US34007	20031024
WO 2004041162	A3	20040729		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2501365	A1	20040521	CA 2003-2501365	20031024
AU 2003284981	A1	20040607	AU 2003-284981	20031024
EP 1558586	A2	20050803	EP 2003-779301	20031024
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006507299	T	20060302	JP 2004-550130	20031024
US 2005288294	A1	20051229	US 2005-530252	20050405
PRIORITY APPLN. INFO.:			US 2002-422307P P	20021030
			WO 2003-US34007 W	20031024

OTHER SOURCE(S): MARPAT 141:7136
GI

I

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

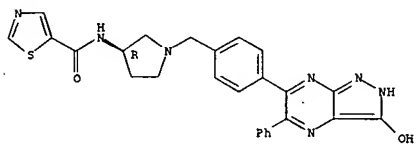
AB The invention relates to thieno[3,4-b]pyrazine derivs. of formula I [wherein: X, Y, and Z are independently selected from C, N, S, or O provided that at least one of X, Y, or Z is N, S, or O; B is a heterocycle, optionally substituted with 1 to 3 substituents; R1 and R2 are independently selected from C(O)-O-(alkyl/aryl/heterocyclyl), alk(en/yn)yl, or CO2H, etc.], useful as inhibitors of activity of one or more of the isoform of the serine/threonine protein kinase, Akt (also known as PKB). The invention is further directed to chemotherapeutic compns. containing the compds. of this invention and methods for treating cancer comprising administration of the compds. of the invention. The invented compds. were screened in Akt kinases assays, PKA and PKC assays, in cell based assays to determine inhibition of Akt/PKB, and for inhibition of tumor growth (specific compds. were tested and were found to have IC50 < 20 μM against one or more of Akt1, Akt2, and Akt3). For instance, thienopyrazine derivs. II was prepared via heterocyclization of the obtained

RN 690662-14-7 CAPLUS
CN 5-Thiazolecarboxamide, N-[(3R)-1-[[4-(3-hydroxy-5-phenyl-2H-pyrazolo[3,4-b]pyrazin-6-yl)phenyl]methyl]-3-pyrrolidinyl]-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 690662-03-4
CMF C26 H23 N7 O2 S

Absolute stereochemistry.



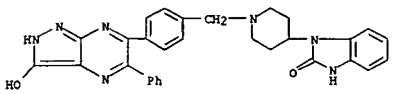
CM 2

CRN 76-05-1
CMF C2 H F3 O2

RN 690662-15-8 CAPLUS
CN 2H-Benzimidazol-2-one, 1,3-dihydro-1-[1-[[4-(3-hydroxy-5-phenyl-2H-pyrazolo[3,4-b]pyrazin-6-yl)phenyl]methyl]-4-piperidinyl]-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 690662-04-5
CMF C30 H27 N7 O2



CM 2

CRN 76-05-1
CMF C2 H F3 O2

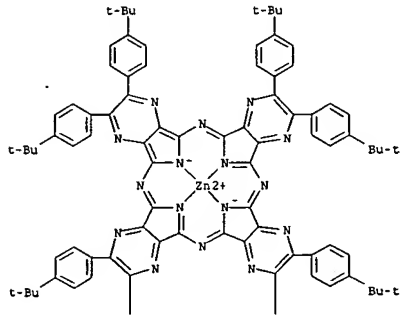
ACCESSION NUMBER: 2004:202763 CAPLUS
DOCUMENT NUMBER: 142:272664
TITLE: Product class 9: phthalocyanines and related compounds
AUTHOR(S): McKeown, N. B.
CORPORATE SOURCE: Dept. of Chemistry, University of Manchester, Manchester, M13 9PL, UK
SOURCE: Science of Synthesis (2004), 17, 1237-1368
CODEN: SSCYJ9
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Preparation is considered for unsubstituted phthalocyanine, metal phthalocyanine complexes and their substituted sym. and unsym. derivs.

IT 160629-45-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of phthalocyanines and their metal complexes)

RN 160629-45-8 CAPLUS
CN Zinc, [2,3,9,10,16,17,23,24-octakis[4-(1,1-dimethylethyl)phenyl]-29H,31H-tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphyrazinato(2-)-N29,N30,N31,N32]-, (SP-4-1)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

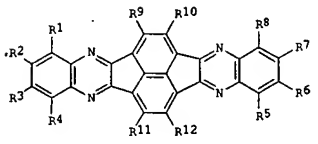
REFERENCE COUNT: 682 THERE ARE 682 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:582449 CAPLUS
DOCUMENT NUMBER: 139:141049
TITLE: Azafluoranthene compounds having diarylamino group and organic electroluminescent devices using them
INVENTOR(S): Iwakuma, Toshihiro; Hosokawa, Chishio; Kusumoto, Tadashi
PATENT ASSIGNEE(S): Sekiyu Sangyo Kasseika Center, Japan; Idemitsu Kosan Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003212875	A	20030730	JP 2002-13222	20020122
PRIORITY APPLN. INFO.:			JP 2002-13222	20020122

OTHER SOURCE(S): MARPAT 139:141049
GI



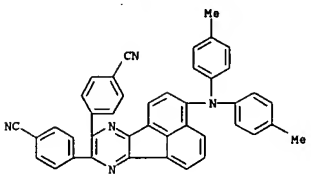
I

AB The title compds. I (R1-R12 = H, (un)substituted C1-30 alkyl, (un)substituted C1-30 alkoxy, (un)substituted C6-40 aryl, C3-20 trialkylsilyl, (un)substituted C6-20 aryloxy, CF3, cyano; NAr1Ar2; Ar1, Ar2 = Ph, naphthyl, anthracenyl, phenanthrenyl, acenaphthenyl, biphenylyl, fluorenyl, carbazolyl, thiophenyl, triazolyl, thiadiazolyl; NAr1Ar2 may be cyclyl; ≥1 of R1-R12 = NAr1Ar2) are useful as red-emitting electroluminescent materials. Markush structures of the other 8 azafluoranthene compds. are also given. Electroluminescent devices using the compds. show high brightness and high luminescent efficiency.

IT 566933-14-0P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of azafluoranthene compds. having diarylamino group and red-emitting organic electroluminescent devices using them)

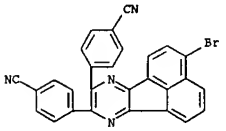
RN 566933-14-0 CAPLUS
CN Benzonitrile, 4,4'-[3-[bis(4-methylphenyl)amino]acenaphtho[1,2-b]pyrazine-8,9-diyl]bis- (9CI) (CA INDEX NAME)

L12 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



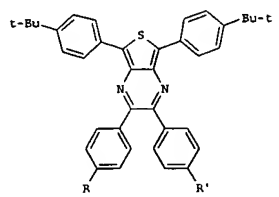
IT 566933-13-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of azafluoranthene compds. having diarylamino group and red-emitting organic electroluminescent devices using them)

RN 566933-13-9 CAPLUS
CN Benzonitrile, 4,4'-(3-bromoacenaphtho[1,2-b]pyrazine-8,9-diyl)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:487191 CAPLUS
DOCUMENT NUMBER: 137:262721
TITLE: Star-shaped thieno-[3,4-b]-pyrazines: a new class of red-emitting electroluminescent materials
AUTHOR(S): Thomas, K. R. Justin; Lin, Jiann T.; Tao, Yu-Tai; Chuen, Chang-Hao
CORPORATE SOURCE: Institute of Chemistry, Academia Sinica, Taipei, 115, Taiwan
SOURCE: Advanced Materials (Weinheim, Germany) (2002), 14(11), 822-826
CODEN: ADVMEW; ISSN: 0935-9648
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:262721
GI



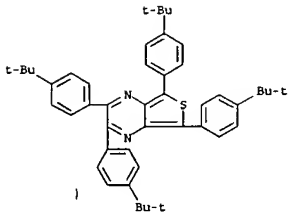
I

AB The title red dyes I (R = R' = t-Bu, OMe, CN; R = CN, R' = t-Bu; R = R' = Br; 1-5, resp.) and I (R = R' = PhNAr, Ar = Ph, 1-naphthyl; 6, 7, resp.) were prepared and their electronic absorption and fluorescence properties studied as functions of substituent and solvent. Oxidation and reduction potentials exhibited LFERs with respect to substituents. Double-layer red-emitting EL devices were fabricated using 6 or 7 as hole-transport as well as emitting layer and TPBI as electron-transport layer.

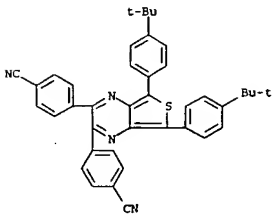
IT 463932-62-9P 463932-64-1P 463932-65-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of star-shaped thieno[3,4-b]pyrazines as a new class of red-emitting electroluminescent materials)

RN 463932-62-9 CAPLUS
CN Thieno[3,4-b]pyrazine, tetrakis[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)

L12 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

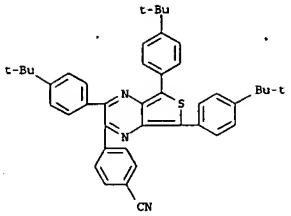


RN 463932-64-1 CAPLUS
CN Benzonitrile, 4,4'-[5,7-bis[4-(1,1-dimethylethyl)phenyl]thieno[3,4-b]pyrazine-2,3-diyl]bis- (9CI) (CA INDEX NAME)



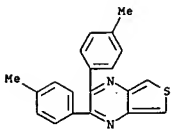
RN 463932-65-2 CAPLUS
CN Benzonitrile, 4-[3,5,7-tris[4-(1,1-dimethylethyl)phenyl]thieno[3,4-b]pyrazin-2-yl]- (CA INDEX NAME)

L12 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

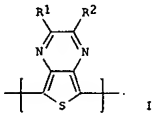
L12 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



L12 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:57004 CAPLUS
DOCUMENT NUMBER: 134:107762
TITLE: Novel polymer for luminous component ingredient and luminous component
INVENTOR(S): Araki, Katsumi
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001019947	A	20010123	JP 1999-191854	19990706
US 6413658	B1	20020702	US 2000-611321	20000706
PRIORITY APPLN. INFO.:			JP 1999-191854 A	19990706

GI

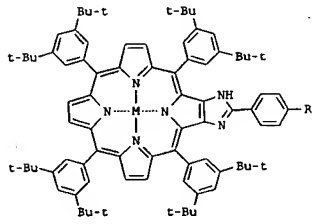


AB The invention refers to a novel polymeric luminescent material which contains the following component I [R1,2 = H, (un)substituted alkyl, aryl, alkoxy, aryloxy alkylthio amino, heteroaryl, or aliphatic heterocycle; and R1,2 may join together to form a ring].
IT 320365-66-0P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(novel polymer for luminous component ingredient and luminous component)
RN 320365-66-0 CAPLUS
CN Thieno[3,4-b]pyrazine, 2,3-bis(4-methylphenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 647021-65-6
CMF C20 H16 N2 S

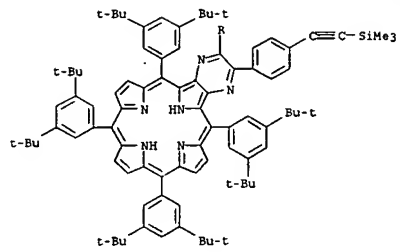
L12 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:563282 CAPLUS
DOCUMENT NUMBER: 131:345652
TITLE: Fused porphyrin-imidazole systems: new building blocks for synthesis of porphyrin arrays
AUTHOR(S): Crossley, Maxwell J.; McDonald, James A.
CORPORATE SOURCE: School of Chemistry, The University of Sydney, 2006, Australia
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1999), (17), 2429-2431
CODEN: JCPRB4; ISSN: 0300-922X
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



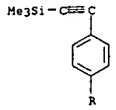
AB Reaction of porphyrin-2,3-diones with aromatic aldehydes and NH4OAc in AcOH-CHCl3 affords 2-aryl-1H-imidazo[4,5-b]porphyrins, e.g., I (R = H, NO2, C.tplbond.CSiMe3, CHO, R1 = 3,5-tBu2C6H3; M = 2H) which, with appropriate substitution and metalation with Zn(II), are useful building blocks for the synthesis of multi-porphyrin arrays; porphyrin-tetraones are similarly converted into the corresponding bis-fused systems.
IT 249920-56-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 249920-56-7 CAPLUS
CN 23H,25H-Pyrazino[2,3-b]porphine, 6,11,16,21-tetrakis[3,5-bis(1,1-dimethylethyl)phenyl]-2,3-bis[4-[(trimethylsilyl)ethynyl]phenyl]- (9CI) (CA INDEX NAME)

L12 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:297129 CAPLUS
DOCUMENT NUMBER: 122:95279
TITLE: Octa-(4-tert-butylphenyl)-tetrapyrazinoporphyrazine and its metal complexes
AUTHOR(S): Freyer, Wolfgang
CORPORATE SOURCE: Max-Born-Inst. Nichtlineare Optik Kurzzeitspektroskopie, Berlin, Germany
SOURCE: Journal fuer Praktische Chemie/Chemiker-Zeitung (1994), 336(8), 690-2
CODEN: JPCCEM; ISSN: 0941-1216
PUBLISHER: Barth
DOCUMENT TYPE: Journal
LANGUAGE: German

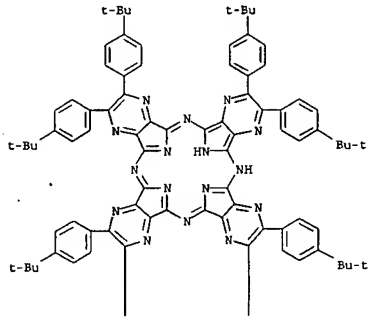
AB Octa(4-tert-butylphenyl)tetrapyrazinoporphyrazine and its copper and zinc complexes were prepared The absorption spectra for the free and complexed species were recorded, as well as the fluorescence spectra of the free species in benzene and DMSO. These complexes have potential applications as photodynamic sensitizers for tumor therapy.

IT 148081-95-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and UV-visible and fluorescence spectra of)

RN 148081-95-2 CAPLUS

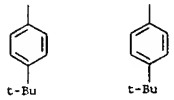
CN 29H,31H-Tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphyrazine, 2,3,9,10,16,17,23,24-octakis[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



L12 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

PAGE 2-A

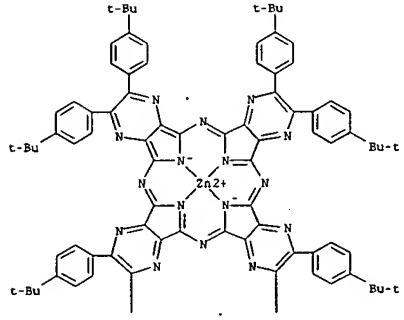


IT 160629-45-8P 160629-46-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 160629-45-8 CAPLUS

CN Zinc, [2,3,9,10,16,17,23,24-octakis[4-(1,1-dimethylethyl)phenyl]-29H,31H-tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphyrazinato(2-)-N29,N30,N31,N32]-, (SP-4-1)- (9CI) (CA INDEX NAME)

PAGE 1-A



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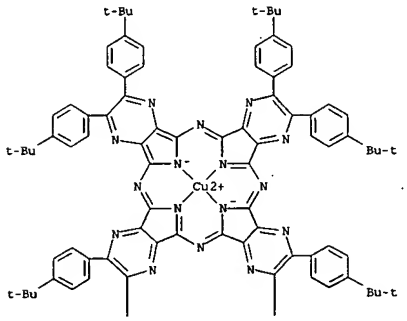
RN 160629-46-9 CAPLUS

L12 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CN Copper, [2,3,9,10,16,17,23,24-octakis[4-(1,1-dimethylethyl)phenyl]-29H,31H-tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphyrazinato(2-)-N29,N30,N31,N32]-, (SP-4-1)- (9CI) (CA INDEX NAME)

PAGE 1-A



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L12 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:404104 CAPLUS
DOCUMENT NUMBER: 119:4104
TITLE: Spectroscopic properties of potential sensitizers for new photodynamic therapy start mechanisms via two-step excited electronic states
AUTHOR(S): Teuchner, K.; Pfarrherr, A.; Stiel, H.; Freyer, W.; Leupold, D.
CORPORATE SOURCE: Max-Born-Inst. Nichtlineare Opt. Kurzzeitspektrosk., Berlin, D/O-1199, Germany
SOURCE: Photochemistry and Photobiology (1993), 57(3), 465-71
CODEN: PHCBAP; ISSN: 0031-8655
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Three substituted tetraazaporphyrins, octa-(4-tert-butylphenyl)tetrapyrazinoporphyrazine, tetra-4-tert-butyl)phthalocyanine, and tetra-(4-tert-butyl)phthalocyanatomagnesium (t4-PcMg), were spectroscopically checked in solns. and liposomes with respect to suitability as potential sensitizers of a possible new start mechanism for photodynamic therapy (PDT) from a stepwise excited higher singlet state. This PDT start mechanism was recently proposed to overcome the problem of O2 (1A2)-caused cutaneous phototoxicity in PDT. By means of absorption and fluorescence measurements as well as nonlinear absorption investigations, transient spectroscopy, and lasing expts., compound t4-PcMg was found to have the most appropriate properties: based on a high fluorescence quantum yield (ΦFl = 0.84) and a very low crossing to the triplet (ΦISC = 0.05), 2 higher excited states can be effectively populated both by 2 stepwise absorption transitions at 674 nm and consecutive absorption transitions at 674 and 710 nm. Moreover, t4-PcMg incorporates into liposomes very well with spectroscopic properties similar to those in solution

IT 148081-95-2
RL: PRP (Properties)
(spectroscopic properties of, photodynamic therapy in relation to)

RN 148081-95-2 CAPLUS
CN 29H,31H-Tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphyrazine, 2,3,9,10,16,17,23,24-octakis[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)

L12 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

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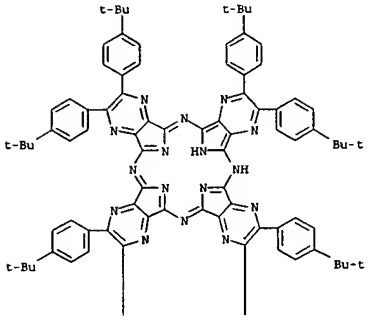
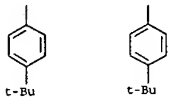


PAGE 2-A

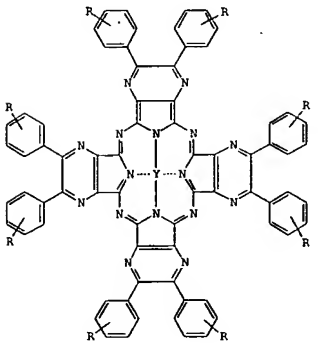


L12 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:22088 CAPLUS
DOCUMENT NUMBER: 118:22088
TITLE: Preparation of octakis(alkylphenyl)tetrapyrazinoporphyrins as neoplasm inhibitors
INVENTOR(S): Freyer, Wolfgang
PATENT ASSIGNEE(S): Zentralinstitut fuer Optik und Spektroskopie, Germany
SOURCE: Ger. Offen., 4 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4109595	A1	19920924	DE 1991-4109595	19910320
PRIORITY APPLN. INFO.:			DE 1991-4109595	19910320

OTHER SOURCE(S): MARPAT 118:22088
GI



I

AB Title compds. [I; R = (cyclo)alkyl; Y = 2H, metal ion] were prepared as neoplasm inhibitors (no data). Thus, 5,6-bis(4-tert-butylphenyl)-2,3-dicyanopyrazine was refluxed 4 h with Zn(OAc)2 as ZnCl2 to give I (R = 4-CMe3, Y = Zn2+).

IT 144828-32-0P 145142-03-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of, as neoplasm inhibitor)

RN 144828-32-0 CAPLUS
CN 29H,31H-Tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphine, 2,3,9,10,16,17,23,24-octakis[4-(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)

L12 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

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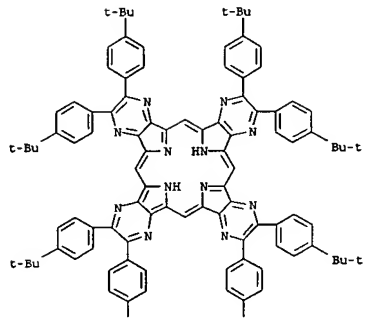

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RN 145142-03-6 CAPLUS
CN Zinc, [2,3,9,10,16,17,23,24-octakis[4-(1,1-dimethylethyl)phenyl]-29H,31H-tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphinato(2-)-N29,N30,N31,N32]-, (SP-4-1)- (9CI) (CA INDEX NAME)

L12 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

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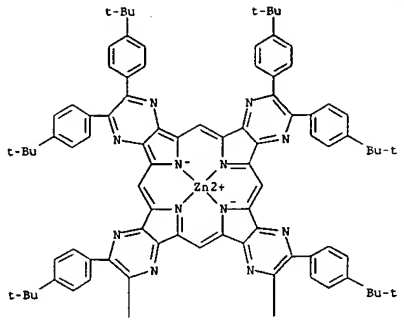

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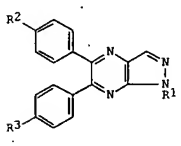
L12 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:241729 CAPLUS
DOCUMENT NUMBER: 116:241729
TITLE: Topical skin conditioners
INVENTOR(S): Sado, Tetsuya
PATENT ASSIGNEE(S): Lion Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03287513	A	19911218	JP 1990-90000	19900404
PRIORITY APPLN. INFO.:			JP 1990-90000	19900404

OTHER SOURCE(S): MARPAT 116:241729
GI



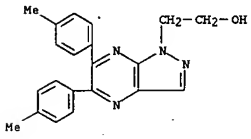
I

AB A topical skin conditioner contains 1H-pyrazolo[3,4-b]pyrazine derivs. (I; R1= H, vinyl, CH2CH2R4 where R4= OH, acetyloxy, succinyloxy, halo; R2, R3= H, halo, lower alkyl, lower alkoxy). It lightens the skin and prevents tissue degeneration. A cosmetic lotion containing 0.1% by weight 1-(2-acetoxyethyl)-5,6-diphenyl-1H-pyrazolo[3,4-b]pyrazine was prepared

IT 128586-38-9
RL: BIOL (Biological study)
(cosmetic skin conditioners containing)

RN 128586-38-9 CAPLUS

CN 1H-Pyrazolo[3,4-b]pyrazine-1-ethanol, 5,6-bis(4-methylphenyl)- (CA INDEX NAME)

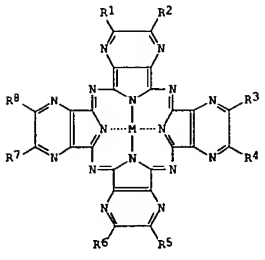


L12 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:431112 CAPLUS
DOCUMENT NUMBER: 115:31112
TITLE: Near IR-absorbing tetrahydrazinoporphyrazine derivatives
INVENTOR(S): Nagasaki, Fumihiko; Hatano, Hiromi; Takahashi, Hiroshi
PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03007288	A	19910114	JP 1989-219865	19890825
PRIORITY APPLN. INFO.:			JP 1989-32143	A1 19890210
			JP 1989-73154	A1 19890324

OTHER SOURCE(S): MARPAT 115:31112
GI



I

AB Tetrahydrazinoporphyrazine derivs. I [R1-8 = H, halo, amino, substituted Ph or furyl, (un)substituted thienyl, PhO, alkoxy, phenylthio, or alkylthio; R1R2, R3R4, R5R6, R7R8 = 1,2-phenylenedioxy, 1,2-phenylenedithio; ≥1 of R1-8 is not H; M = ZH, metal, metal oxide, metal hydroxide, acyl metal, alkoxy metal, siloxy metal, metal halide] show good organic solvent solubility and are useful for optical recording, photosensitive materials, catalysts, and freshness preservatives (no data). Thus, stirring 2,3-dicyano-5,6-diphenylpyrazine and VCl3 in chloronaphthalene under reflux for 5 h gave 48% I (R1-8 = Ph, M = VO) showing λmax 690 nm (in 97% H2SO4).

IT 133952-66-6P 133952-68-8P 134620-03-4P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of, near IR-absorbing)

RN 133952-66-6 CAPLUS

CN Copper, [2,3,9,10,16,17,23,24-octakis[4-(1-methylethyl)phenyl]-29H,31H-tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphyrazinato(2-)-N29,N30,N31,N32]-, (SP-4-1)- (9CI) (CA INDEX NAME)

L12 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

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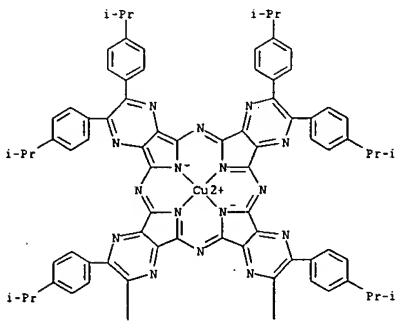

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RN 133952-68-8 CAPLUS

CN Vanadium, [2,3,9,10,16,17,23,24-octakis[4-(1-methylethyl)phenyl]-29H,31H-tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphyrazinato(2-)-N29,N30,N31,N32]oxo-, (SP-5-12)- (9CI) (CA INDEX NAME)

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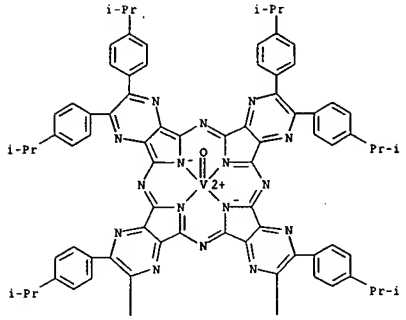

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RN 134620-03-4 CAPLUS
CN Aluminum, chloro[2,3,9,10,16,17,23,24-octakis[4-(1-methylethyl)phenyl]-29H,31H-tetrapyrazino[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphyrazinato(2-)-N29,N30,N31,N32]-, (SP-5-12)- (9CI) (CA INDEX NAME)

L12 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

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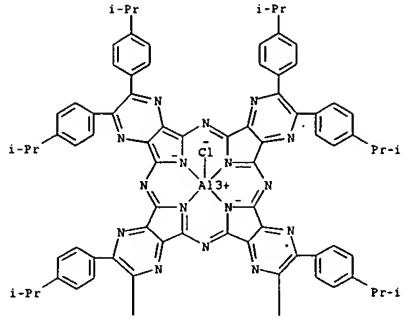

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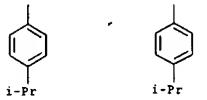
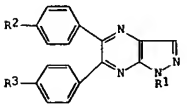


ACCESSION NUMBER: 1990:478422 CAPLUS
DOCUMENT NUMBER: 113:78422
TITLE: Preparation of 1H-Pyrazolo[3,4-b]pyrazines as blood platelet aggregation inhibitors and antiinflammatories
INVENTOR(S): Sado, Tetsuya; Inoue, Akira
PATENT ASSIGNEE(S): Lion Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

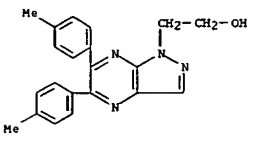
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02101078	A	19900412	JP 1988-252242	19881006
JP 2631139	B2	19970716		
PRIORITY APPLN. INFO.:			JP 1988-252242	19881006

OTHER SOURCE(S): MARPAT 113:78422
GI



I

AB Blood platelet aggregation inhibitors and antiinflammatories contain the title compds. I (R1 = H, vinyl, CH2CH2R4; R2, R3 = H, halo, lower alkyl, lower alkoxy; R4 = OH, AcO, succinyloxy, halo) as active ingredients. 5-Amino-4-nitroso-1-(2-hydroxyethyl)pyrazole was hydrogenated over Pd/C in MeOH, the catalyst was removed, and the product refluxed with 4,4'-dimethoxydibenzyl for 1 h to give 84% I (R1 = CH2CH2OH, R2 = R3 = OMe) (II), which at 2.5 + 10-7 M gave 50% inhibition of arachidonic acid-induced blood platelet aggregation. LD50 of II was >2000 mg/kg p.o. in mice.
IT 128586-38-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as blood platelet aggregation inhibitor and anti-inflammatory agent)
RN 128586-38-9 CAPLUS
CN 1H-Pyrazolo[3,4-b]pyrazine-1-ethanol, 5,6-bis(4-methylphenyl)- (CA INDEX NAME)

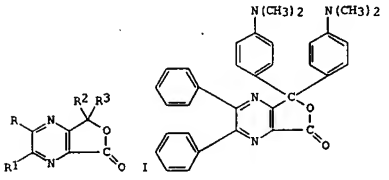


L12 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L12 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:111426 CAPLUS
DOCUMENT NUMBER: 106:111426
TITLE: Chromogenic compounds for pressure-sensitive and thermal copying processes
INVENTOR(S): Hall, Nigel
PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK
SOURCE: Eur. Pat. Appl., 52 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 192328	A1	19860827	EP 1986-300305	19860117
EP 192328	B1	19900509		
R: CH, DE, FR, GB, IT, LI				
JP 61195164	A	19860829	JP 1986-31036	19860217
PRIORITY APPLN. INFO.:			GB 1985-4631 A	19850222
OTHER SOURCE(S):	MARPAT 106:111426			

GI



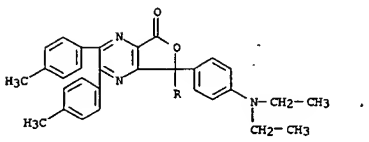
I II

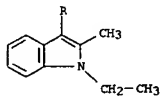
AB Chromogenic pyrazine derivs. I (R, R1 = H, alkenyl, alkoxy, aryl, etc. provided that R and R1 are not H at the same time; R2 and R3 = heterocyclic ring having aryl group annealled through a conjugated N linkage a homocyclic aryl group having substituent NR4R5; R4, R5 = H, R4 and R5 together with the N to which they are joined may form an heterocyclic ring provided R4 and R5 = H at the same time] are described for thermal recording materials and pressure-sensitive copying papers with improved lightfastness. Thus, a thermal recording paper was prepared by coating with a composition containing II and bisphenol A as developer to give green
colored images with excellent lightfastness.

IT 105490-76-4P 105490-78-6P
RL: PREP (Preparation)
(preparation of, for application in pressure-sensitive copying paper and thermal recording material)

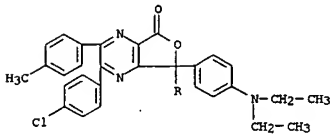
RN 105490-76-4 CAPLUS
CN Furo[3,4-b]pyrazin-5(7H)-one, 7-[4-(diethylamino)phenyl]-7-(1-ethyl-2-methyl-1H-indol-3-yl)-2,3-bis(4-methylphenyl)- (CA INDEX NAME)

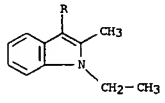
L12 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)





RN 105490-78-6 CAPLUS
CN Furo[3,4-b]pyrazin-5(7H)-one, 2-(4-chlorophenyl)-7-[4-(diethylamino)phenyl]-7-(1-ethyl-2-methyl-1H-indol-3-yl)-3-(4-methylphenyl)- (CA INDEX NAME)

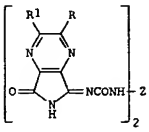




L12 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1980:43274 CAPLUS
DOCUMENT NUMBER: 92:43274
ORIGINAL REFERENCE NO.: 92:7219a,7222a
TITLE: Pyrrolopyrazine pigments
INVENTOR(S): Genda, Yoshikazu; Tomita, Nobuo; Ito, Masaru
PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54083026	A	19790702	JP 1977-150280	19771214
JP 60028874	B	19850706		
PRIORITY APPLN. INFO.:			JP 1977-150280 A	19771214

GI

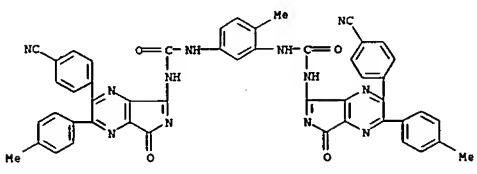


I

AB I (R, R1 = H, Me, furyl, phenyl; Z = aromatic carbocyclic residue) useful as light- and solvent-fast pigments in coatings and inks were prepared For example, 7-amino-2,3-diphenyl-5-oxopyrrolo[3,4-b]pyrazine [70385-89-6] was treated with 1,5-naphthalene diisocyanate [3173-72-6] to give I (R = R1 = Ph, Z = 1,5-C10H6) [72362-68-6].

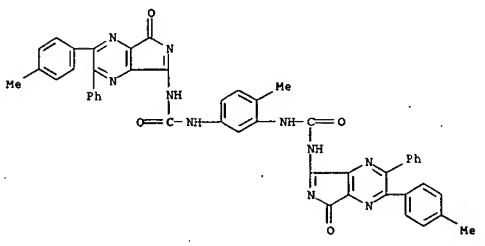
IT 72362-82-4P 72362-83-5P 72362-84-6P
RL: PREP (Preparation)
(pigments, light- and solvent-resistant, for coatings and inks, manufacture
of)

RN 72362-82-4 CAPLUS
CN Urea, N,N''-(4-methyl-1,3-phenylene)bis[N'-[5-(4-cyanophenyl)-6-(4-methylphenyl)-1-oxo-1H-pyrrolo[3,4-b]pyrazin-3-yl]- (9CI) (CA INDEX NAME)

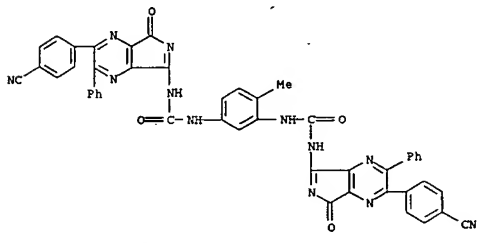


L12 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

RN 72362-83-5 CAPLUS
CN Urea, N,N''-(4-methyl-1,3-phenylene)bis[N'-[6-(4-methylphenyl)-1-oxo-5-phenyl-1H-pyrrolo[3,4-b]pyrazin-1-yl]- (9CI) (CA INDEX NAME)



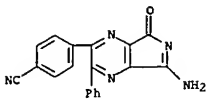
RN 72362-84-6 CAPLUS
CN Urea, N,N''-(4-methyl-1,3-phenylene)bis[N'-[6-(4-cyanophenyl)-1-oxo-5-phenyl-1H-pyrrolo[3,4-b]pyrazin-3-yl]- (9CI) (CA INDEX NAME)



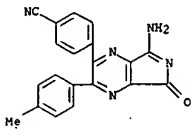
IT 70385-93-2 72362-69-7 72362-70-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with diisocyanates)

RN 70385-93-2 CAPLUS
CN Benzonitrile, 4-(7-amino-5-oxo-2-phenyl-5H-pyrrolo[3,4-b]pyrazin-3-yl)- (CA INDEX NAME)

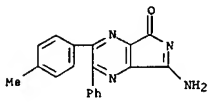
L12 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)



RN 72362-69-7 CAPLUS
CN Benzonitrile, 4-[3-amino-6-(4-methylphenyl)-1-oxo-1H-pyrrolo[3,4-b]pyrazin-5-yl]- (9CI) (CA INDEX NAME)



RN 72362-70-0 CAPLUS
CN 1H-Pyrrolo[3,4-b]pyrazin-1-one, 3-amino-6-(4-methylphenyl)-5-phenyl- (9CI) (CA INDEX NAME)

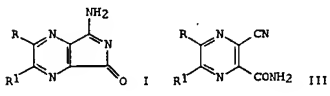


L12 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1979:405250 CAPLUS
DOCUMENT NUMBER: 91:5250
ORIGINAL REFERENCE NO.: 91:987a,990a
TITLE: 7-Amino-2,3-substituted-5-oxopyrrolo[3,4-b]pyrazines
INVENTOR(S): Genda, Yoshikazu; Tomita, Nobuo; Ito, Masaru; Kano, Saburo
PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54016497	A	19790207	JP 1977-80960	19770708
JP 62005915	B	19870207		

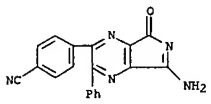
PRIORITY APPLN. INFO.: JP 1977-80960 A 19770708
GI



AB Title compds. I [R, R1 = Ph, H (II); Me, H; Ph, Ph; Me, Me; H, H; 2-furyl, 2-furyl; Ph, 4-NCC6H4; 4-O2NC6H4, Ph] were prepared by reaction of III with MeOH or EtOH in the presence of Na or K. Thus, a mixture of 2 g III (R = Ph, R1 = H), MeOH, and 0.5 g Na was stirred at room temperature to give 90% II.

IT 70385-93-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 70385-93-2 CAPLUS
CN Benzonitrile, 4-(7-amino-5-oxo-2-phenyl-5H-pyrrolo[3,4-b]pyrazin-3-yl)- (CA INDEX NAME)



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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	98.58	640.28

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-14.40	-15.20

STN INTERNATIONAL LOGOFF AT 09:56:48 ON 10 JAN 2008